denominator. In assessing the current balance, the Congressional Budget Office has updated a 1976 Defense Department analysis that uses ADEs. 3/

To assess the balance of forces on the basis of ADE scores, this study makes numerous assumptions. The study assumes, as do many military plans, that the Warsaw Pact begins mobilizing for war four days before NATO responds with its own mobilization. As noted above, the study also assumes that NATO defends itself using 15 of the 16 active U.S. Army divisions, plus various reserve and other forces. The other allies would contribute some 32 additional active divisions, plus various reinforcements. The Warsaw Pact is assumed to attack with 90 divisions, increasing that number to 120 within 30 days. The remaining 231 Pact divisions would either defend their flanks and Eastern borders or remain in reserve.

Figure 2 shows the balance, as it was assessed in 1980, of the Warsaw Pact to NATO forces during the first 90 days following a Pact mobilization. The balance is measured by the ratio of the ADE score for all Pact forces in the European theatre to the score for all NATO forces. In 1975, the Department of Defense indicated that, should the Pact achieve an overall force ratio of 1.5:1 or greater, NATO might be unable to execute a successful defense of Central Europe. 4/ Thus, the 1.5:1 Pact/NATO ratio stands as a measure of what the Department of Defense has in the past regarded as "minimally acceptable" for NATO.

The criterion suggests two periods during which the Pact could have an advantage. In the initial stage following Pact mobilization, the advantage to Pact forces (suggested by ratios of almost 2:1) would result from their preemptive move and the reaction time needed for NATO forces to mobilize in response and take up defensive positions. As reinforcements arrived from the United States, the early Pact advantage would be eroded. By perhaps the fifth week, however, the Pact's advantage would be restored, as 30 more Pact divisions became available. The ratio would reach 1.7:1 and settle there over the rest of the first three months of conventional conflict.

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3. See Office of the Secretary of Defense, A Report to Congress on U.S. Conventional Reinforcements to NATO, (June 1976), p. IV-3.

4. See Annual Defense Department Report, Fiscal Years 1976 and Fiscal Year 197T, p. III-15.

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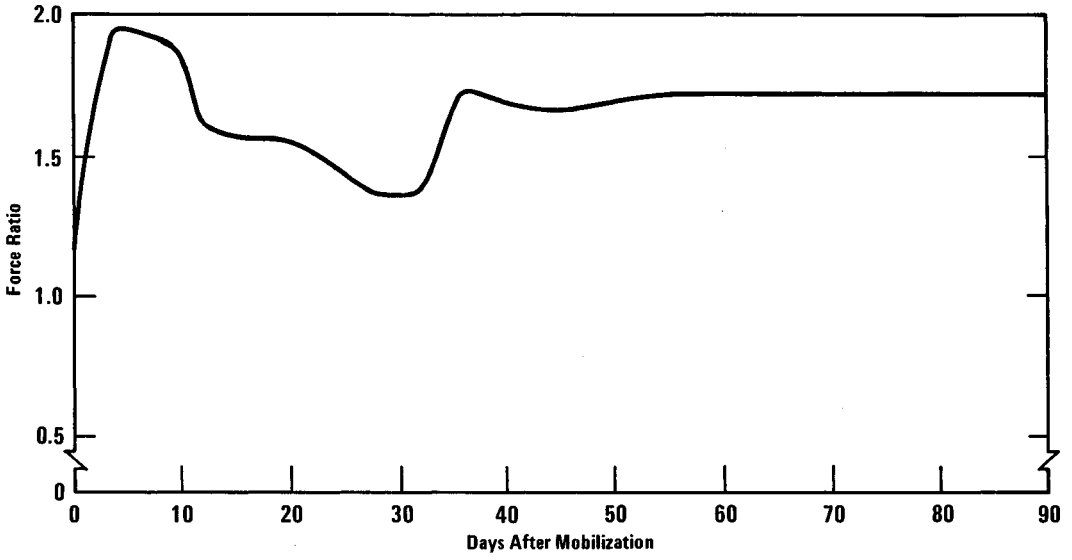
Figure 2.

Shifting Warsaw Pact/NATO Force Balance: 90 Days Following Pact Mobilization



SOURCE: Congressional Budget Office.

The Projected Force Balance in 1987

A recent CBO analysis concludes that, if the Pact nations continue to modernize their ground forces at recent rates, then the modernization programs planned by the United States and its NATO allies will only maintain their current position in the force balance. 5/ Substantial improvements in NATO's position could only be achieved by adding more modernized equipment or new combat divisions. Thus, if these additions are not made, the ratio of forces is likely to remain well above the level of 1.5:1.

Even so, the risk to NATO is not easy to assess. Analysis of the ratios are subject to substantial limitations, and assumptions are made to account for uncertainties. The CBO analysis assumes, for example, that all member nations in the Pact alliance participate fully on the Pact's side; yet ongoing political events in Central Europe (such as the contention in Poland) open this assumption to question. Moreover, the Administration

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5. See Congressional Budget Office, Army Ground Combat Modernization for the 1980s: Potential Costs and Effects for NATO (November 1982).

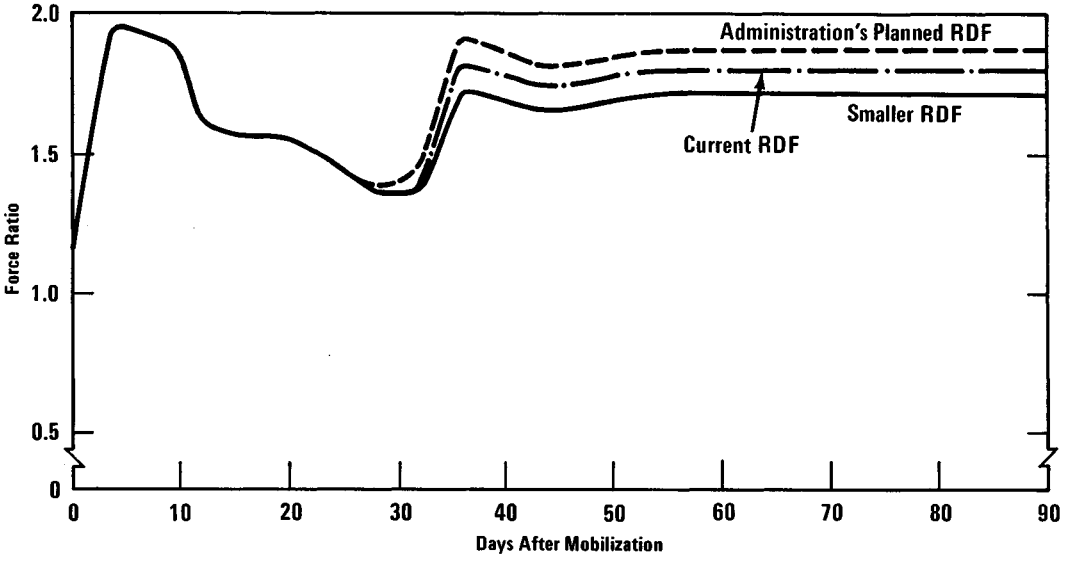
plans to add no Army combat divisions, despite the relatively unfavorable ratios that analysis reveals. The current force balance thus appears to have been accepted by the current administration, however. It is in this context that the effects of alternative versions of the RDF therefore have to be assessed.

RDF FORCE LEVELS AND THE COMBAT CAPABILITIES OF NATO

The strength of NATO's position in the event of two simultaneous wars with one involving the RDF would vary not only with the size of the RDF but also with the timing of how it was used. The effects of force ratios on the three RDFs analyzed are displayed in Figure 3.

Figure 3.

Effects of RDF Size on Warsaw Pact/NATO Force Balance: 90 Days Following Pact Mobilization



SOURCE: Congressional Budget Office.

Effects of a Larger RDF

The effects for NATO of the larger RDF the Administration envisions would be influenced both by what specific forces were diverted from NATO and when. Not all the U.S. assets earmarked for use in the Administration's planned RDF--the five Army divisions, ten Air Force fighter wings, and the Navy and Marine Corps forces--would necessarily be drawn upon

for combat in Southwest Asia. In the Air Force, some of the ten wings assigned to the larger RDF would not necessarily be part of the 20 wings required to reinforce NATO during the first ten days of a war in Europe. The NATO role of these wings would be more one of replacement and sustainment of early-deploying NATO squadrons. Moreover, because aircraft squadrons could redeploy more easily than combat divisions, the use of those squadrons in an RDF engagement might not greatly affect NATO capabilities. Also, the Air Force plans by the mid-1980s to increase its force size from today's 36 air wings to 40 wings. This growth might fully accommodate the needs of the larger RDF, though current plans do not make clear what portion, if any, of these added forces are designated for the RDF.

Most of the Marine Corps forces assigned to the larger RDF are relatively "light" forces--that is, they lack large numbers of tanks and other armored vehicles--and so would be less useful in Central Europe. They would serve primarily on NATO's flanks (for example, Norway) or as backup later in a NATO war, and thus might be available for an early RDF deployment at no great cost to NATO's capabilities. A parallel argument can be applied to the Army's 82nd Airborne Division. This agile division, armed mostly with light antitank weapons and small arms, has traditionally served as the Army's initial fast-reaction force with no single geographic orientation. Because of this, and because the 82nd Airborne's light armament makes it less suited than many other Army divisions for combat in Central Europe, this division is not generally considered in NATO planning during the first 30 days of a conflict in Europe.

Finally, the Administration plans to build up the size of the Navy fleet from its current level of 551 ships to 600 ships, possibly including 15 aircraft carriers. 6/ This buildup may accommodate the Naval needs of the larger RDF without decreasing the forces currently available to NATO, though again, current plans do not make clear how the new Naval forces would be assigned.

These arguments suggest that the major adverse effect on NATO's position would result from four of the five Army divisions' being assigned to the larger RDF and possibly, from diversion of some of the Air Force wings. In the event of a full deployment of the larger RDF simultaneous with a NATO conflict, the absence of the Army divisions would diminish by 33 percent the number of U.S. divisions available to reinforce NATO during

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6. See Congressional Budget Office, Building a 600-Ship Navy: Costs, Timing, and Alternative Approaches (March 1982).

the first 60 days. After about the thirtieth day of a conflict, the absence of these U.S. divisions would increase the ratio of Pact ground forces to NATO's from 1.7:1 to 1.9:1, an increase of about 12 percent (see Figure 3).

Increasing Forces to Sustain the NATO Commitment. If the United States chose not to relax its European commitment, then the Administration's larger RDF could involve substantial costs. The minimum cost would be the dollars needed to acquire and operate four additional Army divisions. (The current Chief of Staff of the Army has stated that U.S. forces should eventually be augmented by three to five divisions.) Over five years, this would require approximately $37.8 billion in budget authority to maintain the current level of protection for NATO independent of an RDF deployment (see Table 2). This figure includes approximately $7.6 billion for the additional one-time cost of four division sets of modern equipment. Opening and operating four new bases in the United States for the divisions would involve a one-time cost of approximately $9.1 billion, and operating the divisions would cost approximately $9.5 billion. Manpower increases would total approximately 200,000 troops at a cost of about $11.6 billion; this amount would cover not only pay and allowances at today's pay rates but also increased bonuses to ensure that the Army is able to attract needed additional recruits without lowering enlistment quality standards. 7/ Thus, the larger RDF could involve substantial commitments that could lead to pressure for large increases in the defense budget. Moreover, an expansion of the Army by four divisions--requiring the addition of about 200,000 troops--might well require a return to some form of peacetime conscription. Nor is this sum of $37.8 billion for additional Army divisions the only potential cost of this larger RDF.

The heavy involvement of tactical air wings also could give rise to pressure to increase the numbers of wings, though projecting exactly how many is difficult. Over five years, however, the cost to equip and operate each wing could equal approximately $3 billion in budget authority. These costs assume that the added tactical air wings would have F-16 aircraft, the cheaper of the two fighter aircraft currently being purchased by the Air Force. 8/ Moreover, the $3 billion in added costs may understate the

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7. See Congressional Budget Office, "Alternative Military Pay Raises for Fiscal Years 1983-1987: Their Effects on Enlisted Recruiting, Retention, and Personnel Costs," Staff Working Paper (unpublished) (September 1982)

8. The unit cost of the F-16 aircraft in fiscal year 1984 budget authority is approximately $22.3 million. The cost of the F-15 aircraft is approximately $30.4 million. Currently, the Air Force plans to procure a total of 780 F-16 aircraft over the next five years.

actual amount of money required; this sum assumes no increased funds to allow a higher rate of procurement of aircraft. Given the large purchases of F-16 aircraft planned for the next five years, some added funds might be needed.

The Current RDF

For the same reasons noted in the discussion of the larger RDF, deployment of some of these forces earmarked for the current RDF might not greatly affect U.S. capability in NATO, even in the event of simultaneous conflicts in Europe and Southwest Asia. Combat forces for the current RDF consist of three and one-third Army divisions, seven Air Force tactical fighter wings, Marine Corps Amphibious forces, and Navy air and sea forces. Thus, in the two services for which force expansions are planned--the Navy and the Air Force--the United States might be able to meet the needs of the RDF without decreasing the current commitment to NATO.

As would be the case with the Administration's planned RDF, the major effects on NATO capabilities would come from the two Army divisions assigned to the current RDF, the 24th mechanized and 101st airmobile divisions. These two divisions, if deployed to an RDF mission, would be difficult to redeploy to NATO, at least early in a war. NATO planning, however, assumes the availability of these two divisions as reinforcements to the initial ten-division force.

The absence of these divisons would decrease by 20 percent the number of U.S. divisions available to reinforce NATO within the first 60 days of a conflict. The effect that the loss of these divisions would have on the balance of Warsaw Pact to NATO forces can be seen in Figure 3. Pact-to-NATO force ratios beyond about 30 days would rise from 1.7:1 to 1.8:1, an increase of 6 percent.

Looked at another way, the potential price of the RDF is the cost of retaining the current Warsaw Pact/NATO force balance independent of any RDF deployment. This would necessitate manning, outfitting, and supporting two additional Army divisions. Over five years, the cost of these two divisions--which would retain the NATO commitment independent of the current RDF--is approximately $18.9 billion in budget authority. This figure includes the additional one-time cost of procuring two division sets of modern equipment, for approximately $3.8 billion. Opening and operating two new bases for the divisions in the United States would involve a one-time cost of about $4.6 billion, plus operating costs of nearly $4.8 billion. Manpower increases would total approximately 100,000 troops

at a cost of $5.8 billion. This amount would cover not only pay and allowances at today's pay rates but also increased bonuses to ensure that the Army is able to attract needed additional recruits without compromising enlistment standards.

A Smaller RDF

Deployment of this smaller RDF would not affect NATO significantly, even in the event of two simultaneous wars. The ground combat mission could be carried out by the 82nd Airborne Division and Marine Corps units, which, as noted above, are not initially oriented toward NATO. Thus, there would be minimal impact on the NATO defense. Air Force and Navy units in the smaller RDF would be nearly the same as in the current RDF, and as in the cases examined above, might not have any effect on the NATO reinforcement mission. Accordingly, the smaller RDF need create no pressure for future increases in the defense budget. In fact, it could curb defense cost growth over the coming five years by as much as $11 billion. (The sources of these potential savings, mainly in the area of mobility, are examined in Chapter IV.)

As this chapter suggests, the most important affects of alternative versions of the RDF would be on the NATO commitment or, alternatively, on the U.S. defense budget. The budgetary costs (or savings) of transporting and supporting RDFs of various sizes are analyzed in the following two chapters.

CHAPTER IV. MEETING THE MOBILITY NEEDS OF THE RDF--POTENTIAL COSTS AND SAVINGS

Critics of the Rapid Deployment Force have charged that it lacks the assets needed to move it quickly enough to a distant theater of combat. Indeed, the Administration has launched a major program to expand U.S. mobility resources in several areas. When completed, this effort--costing more than $13 billion by 1988--will have the capacity to meet the fast mobilization needs of the current RDF. The requirements of the Administration's planned larger RDF, however, may still outstrip these mobility modernization plans.

Thus, the Congress may face decisions about financing mobility force expansions, and the size of RDF to be available would be a critical determinant. Should funding for mobility forces be set at a level that would meet the needs of the larger RDF of 440,000 troops? Of the current RDF of 222,000? Or, if the smaller RDF of 165,000 is deemed adequate for its mission, should the Congress seek budgetary savings by tailoring mobility funding to an RDF of that relatively reduced size? As background for considering these questions, a general review of the United States' current mobility assets and of the upgrades and expansions now planned can be useful.

TODAY'S MOBILITY FORCES AND THE PROPOSED IMPROVEMENTS

For an effective deployment, the current RDF would require about 396,000 tons of unit equipment to be delivered across 12,000 miles to Southwest Asia. 1/ The larger RDF could require approximately 737,000 tons; the smaller RDF, perhaps 169,000 tons. In addition to the volume of materiel that could be delivered, the timing of delivery is also critical. In

1. The unit equipment does not include the ammunition and resupply that would also be required for the forces. The Department of Defense has estimated that the ammunition and resupply required within the first 30 days for forces equivalent in size and capability to the current RDF may be as much as 440,000 short tons. This is approximately 10 percent more than the total tonnage of the unit equipment of the forces.

assessing RDF mobility needs, this study assumes that the United States would want to deploy all of the unit equipment for any version of the RDF within 30 days, which seems consistent with past goals. The Administration indicated that its goal for deploying all ammunition and resupply in addition to the unit equipment is six weeks. 2/

Mobility forces can be grouped into three major programs: airlift, sealift, and so-called "prepositioning." 3/ Each of these has unique abilities and limitations. Airlift can respond most quickly, but it is costly and very limited in the volume of tonnage it can transport. Sealift is slow, but it can deliver large volumes of tonnage; further, sealift is generally much cheaper than airlift. Prepositioning--storing combat equipment overseas in warehouses or ships--usually commits materiel to a certain geographic area, and its costs may be high. Housing in buildings or storage ships must be available, and duplicate sets of equipment must be bought for the troops scheduled for deployment.

Though the total current mobility capacity of the United States is substantial, it would be limited during the early weeks of any RDF deployment. Figure 4 gives an indication of the total tonnage that could be

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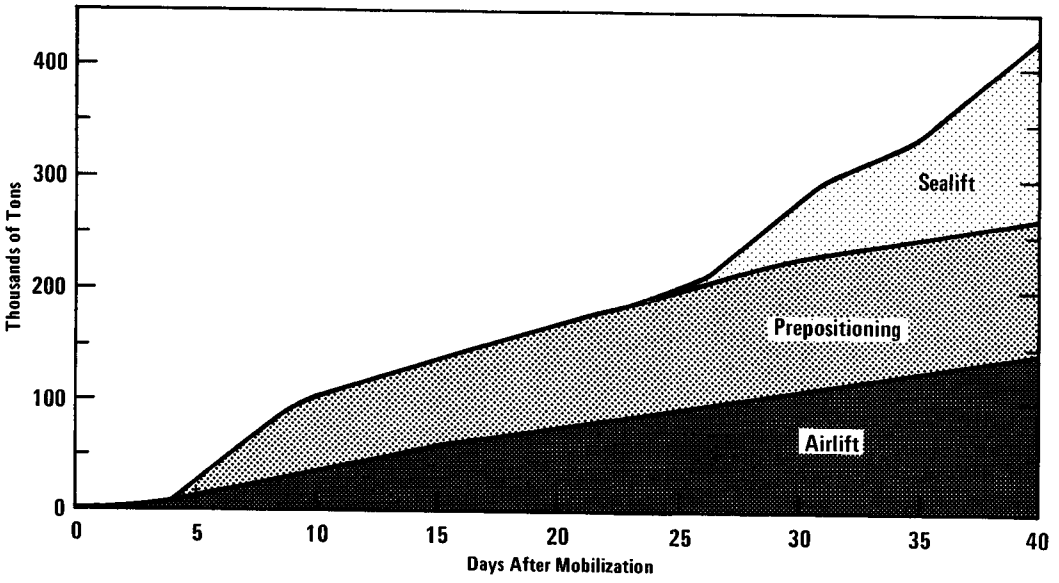
2. Thirty days is the goal reported publicly in the fiscal year 1982 Defense Report. A general goal of four to six weeks was stated in last year's defense report. The Administration has now relaxed that requirement to six weeks in the fiscal year 1984 Defense Report. See U.S. Department of Defense, Annual Report to Congress, Fiscal Year 1982, p. 198; U.S. Department of Defense, Annual Report to Congress, Fiscal Year 1983, p. III-92; see also U.S. Department of Defense, Annual Report to Congress, Fiscal Year 1984, p. 209.

3. The United States has pursued the practice of prepositioning materiel abroad since 1961. Under this program--called POMCUS, for Prepositioned Materiel Configured to Unit Sets--equipment primarily for Army and Marine Corps units is located in potential areas of conflict. Should war occur, forces would be flown from the United States to POMCUS sites, where they would draw their equipment. This allows the deployment of forces by aircraft in a relatively short period of time as opposed to deployment by sea in a much longer period. For a discussion of the NATO prepositioning program and the effect of prepositioning combat equipment on the NATO force balance, see Congressional Budget Office, Strengthening NATO: POMCUS and Other Approaches (February 1979).

delivered to Southwest Asia using present-day airlift, sealift, and prepositioned assets. With these assets and no more, to deploy the unit equipment of the current RDF to Southwest Asia would take nearly 40 days. Sealift would make no appreciable contribution until the end of the first month. Thus, only a portion of all unit equipment tonnage required for the current RDF could be deployed to Southwest Asia during the first 30 days.

Figure 4.

Total Current Mobility Capacity for the RDF Over Time



SOURCE: Congressional Budget Office.

Airlift

In the event of an RDF deployment, the first units would be delivered by military transport aircraft. The United States currently operates a large fleet of such aircraft, including 70 of the very large C-5 transports and 234 of the smaller C-141Bs. These can be supplemented by more than 350 commercial transports requisitioned under the Civilian Reserve Air

Fleet (CRAF) program. 4/ The aircraft now available to provide the immediate intertheater airlift for any deployment include:

Military Aircraft (Primary Aircraft Authorized)	
C-5 Transports	70
C-141B	234
Subtotal	304
Civilian Aircraft	
Boeing-747 Equivalents (Cargo)	49
Boeing-707 Equivalents (Cargo)	78
Boeing-747 Equivalents (Passenger)	143
Boeing-707 Equivalents (Passenger)	97
Subtotal	367

This represents the current number of civilian aircraft available to the government under the CRAF program if there is full mobilization. Without full mobilization, the number of CRAF aircraft available is significantly less.

Airlift Improvements. The mobility assets available to the current RDF would be insufficient to deploy all required equipment according to the arrival schedule set. To meet this shortfall, the Administration has proposed a twofold program to improve rapid deployment capability. Part of the program would increase the usefulness of airlift aircraft now available: the usage rate of the C-141 would be increased from its present ten hours a day to 12.5 hours a day, and the rate of C-5s from six hours a day to the same 12.5 hours. 5/ The other aspect of the program would greatly augment the number of transport aircraft available.

The Administration plans, over the coming five years, to procure more than 100 new airlift planes--56 KC-10 aircraft and 50 C-5s. Though

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4. The CRAF program is a government-funded effort to modify commercial widebody passenger planes by equipping them with cargo-carrying features such as stronger flooring and wider doors. The aircraft would be operated by the airlines as passenger aircraft until mobilized, at which time they would be stripped of their civilian passenger features and used to transport military cargo.

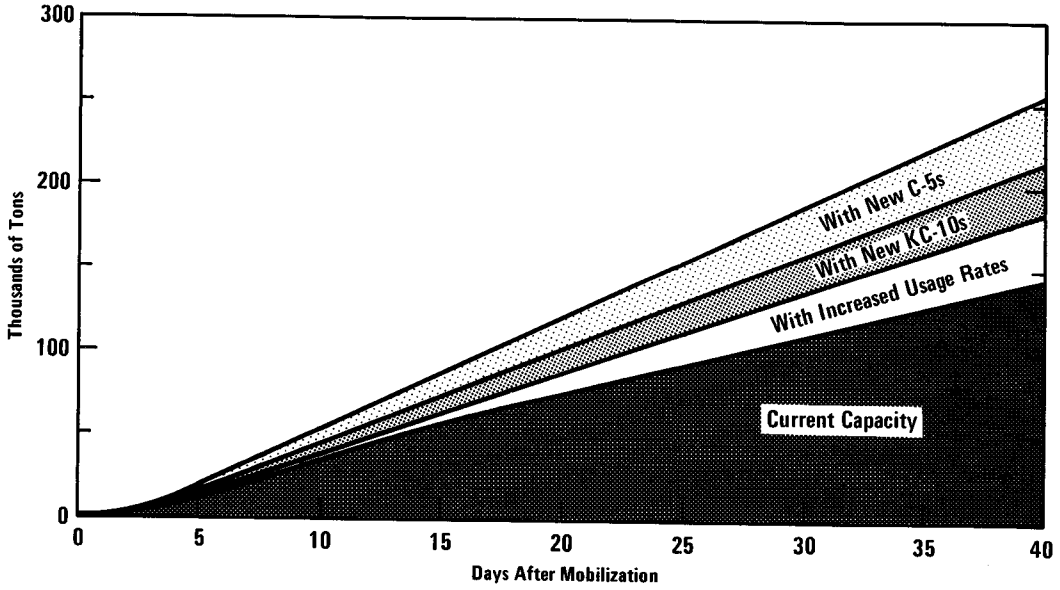
5. Usage rates represent the average flying hours per day per aircraft available to support a deployment.

the KC-10 is being purchased primarily as a tanker aircraft to serve for in-flight refueling, it can also transport cargo. Thus it was proposed for an interim airlift mission, because it could be procured quickly and would be particularly helpful in transporting tactical fighter squadrons in the early days of deployment.

When usage rates are increased, and the new KC-10 and C-5 aircraft are available, airlift capability will increase by approximately 70 percent during the first 30 days after a mobilization. The tonnage that will be transportable will increase from 110,000 tons to 187,000 tons (see Figure 5). Altogether, this package will cost approximately $11.7 billion in budget authority.

Figure 5.

Total Projected Airlift Capacity for the RDF Over Time



SOURCE: Congressional Budget Office

Despite this increase, the program would not fully meet the minimum airlift requirements specified by the Administration. The current fleet of transport aircraft has an airlift capability equivalent to 32 million ton

miles (MTM) per day. 6/ The proposed additions would add less than 14 MTM per day to this capacity. On the other hand, the Administration has indicated that a minimum of 20 MTM per day should be added to the current airlift capability. 7/ Meeting the Administration's stated objective would require a 40 percent increase in the number of aircraft the Administration now plans to procure. Some of this added capacity may be provided by programs that have been proposed; but these are not sufficiently well defined to allow CBO to quantify their effects. For example, greater capability might be achieved by increasing the number of cargo aircraft available in the CRAF program. The Administration has proposed $147 million for this program in fiscal year 1984, but the composition of the program has not yet been determined. Though the Administration wishes to pursue increased use of requisitioned civilian aircraft in the future, no such increases are assumed in this study. The Administration proposed no CRAF funds in the fiscal year 1983 budget, and the $48 million appropriated for CRAF in fiscal year 1982 was not obligated. It is therefore difficult to determine what added capacity increases in CRAF would provide.

Similarly, the Administration is continuing the development of the C-17 advanced cargo transport, for procurement later in this decade. The C-17 emerged as the successful design in the CX competition, which was launched in the late 1970s. The Reagan Administration in 1982 chose the updated C-5 over the C-17 to provide near-term airlift capacity. But the Department of Defense continues to believe the C-17 is needed for the future and has programmed $2.9 billion for development and procurement over the next five years, with a goal of buying six in 1987 and 12 in 1988.

Despite Administration plans, the future of the C-17 is unclear. The Congress appropriated $60 million in 1983 for continued development of the C-17, but it directed that all but $1 million of that amount be taken from other, lower-priority Air Force programs. If the Congress wishes to buy more airlift resources than are currently planned, it must judge the relative merits of procuring C-17s over additional buys of existing aircraft.

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6. Million ton miles is a measure of airlift capability. It is computed on the basis of the number of aircraft available, their speed, the average load carried, and the usage rates. The 32 MTM is based on deployments to Southwest Asia. It represents the maximum that can be delivered, not the sustained or average capability.

7. See U.S. Department of Defense, Congressionally Mandated Mobility Study (30 April 1981), vol 1, Summary, pp. 34, 40.

Because to date the Congress has been unclear in its endorsement of continued development of the C-17, and because of the absence of explicit program details from the Administration on its plans for the total buy of C-17s, this study does not examine the program in detail.

Sealift

Before 1979 and the establishment of the RDF, many people viewed sealift as a mobility asset the primary value of which was in the reinforcing mission for a NATO contingency. The availability of more than 400 civilian NATO cargo ships was taken for granted, and the dwindling size of the readily available U.S. merchant fleet was of little concern. Certainly, sealift was not considered a rapid deployment asset. The availability of sites for prepositioned equipment under the POMCUS program, however, as well as demonstrated host-nation support, greatly reduced the perceived need for sealift in the early days of a NATO deployment.

Creation of the RDF and the focus on Southwest Asia changed this situation. Airlift could only meet a small fraction of the lift requirement, and there are no significant land-based prepositioning sites in the region; nor are there host-nation support agreements to facilitate mobility. Thus, the sealift has taken on a new importance. No longer seen as merely for reinforcement, sealift came to be viewed as part of the total rapid mobility capacity.

The more than 400 ships available for an RDF contingency could come from four sources, listed below in order of potential speed of response:

- Military Sealift Command (MSC) Controlled Fleet--37 ships each with an average capacity of 4,000 tons immediately available to U.S. Navy Military Sealift Command. These ships are either owned by MSC or under long-term charter to MSC. They are manned by civilian crews. In peacetime, they are part of a government fleet that carries military cargo throughout the world. They would be available for any military contingency.

- Ready Reserve Fleet (RRF)--29 ships each with an average capacity of 4,500 tons in a fleet jointly administered by the MSC and the U.S. Maritime Administration. Vessels in this category are kept in a "reduced operating status" and would require five to ten days' preparation to be ready for contingency use.

- o U.S. Merchant Marine--the 216 commercial U.S.-flag ships each with an average capacity of 5,000 tons in this category constitute the largest single source of strategic sealift. Availability of merchant marine ships falls into two categories. The Sealift Readiness Program (SRP) comprises those ships that have received government construction or operating subsidies or are under contract to carry government cargo in peacetime. If no national emergency or mobilization has been declared, SRP ships may be made available by joint agreement of the Secretaries of Defense and Transportation. Under provisions of the Merchant Marine Act of 1936, the Secretary of Transportation may requisition or purchase any U.S. flagship whenever the President declares a national emergency or deems that national security makes requisitioning advisable.

- o National Defense Reserve Fleet--a fleet of 141 World War II Victory-class ships, each with an average capacity of 2,800 tons. These vessels would require two or three months of preparation before they could be used, and therefore could only be used in sustaining a protracted war.

Programmed Improvements. The sealift improvements now planned will greatly increase the United States' early-deploying sealift capability. In 1981, the Navy purchased six high-speed container ships for $210 million and in 1982, for another $68 million, purchased the remaining two ships in this class. These ships, designated SL-7s for military use, have a maximum speed of 33 knots and can sustain an average speed of 26 to 28 knots. In fiscal year 1982, the Congress appropriated more than $300 million to convert four of these container ships to a roll-on/roll-off configuration for greater military utility. 8/ The Navy has requested an additional $252 million to convert the remaining four ships. When the conversion is completed, the ships will be assigned to the MSC-controlled fleet and kept in a reduced operating status that will allow them to be fully loaded and ready to deploy within five days of an alert.

These eight converted ships will be able to carry the combat and sustaining support equipment for one heavy Army division (approximately 88,000 tons). Fully loaded, each would be able to traverse the distance

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8. The adaptation of these SL-7 container ships entails such modifications as removing the shell guides that accommodate containers, strengthening decks to support tanks, and providing a stern ramp and side ports to allow offload through both the stern and side.

between the East Coast of the United States and the Persian Gulf in 19 days' sailing time. This would allow sealift to complement airlift during the early deployment stage. (This assumes that the Suez Canal would not be available for use. If the canal were passable, however, the ships could arrive in the Persian Gulf up to eight days sooner.)

Though no funds are programmed for additional fast sealift, the Defense Department is reviewing plans for increasing the size of the RRF by upgrading the operational availability of ships currently in the NDRF and procuring used merchant ships that are still seaworthy but no longer economical as commercial freighters. The plan is to have a total of 61 cargo ships in the RRF by the end of fiscal year 1988. Though this would make more ships available early for the RDF, the relatively slow average speed (18 knots) and limited load capacity (4,500 short tons) of these particular ships suit them better to sustainment than rapid reinforcement.

Prepositioning

Though untested in conflict, prepositioning combat equipment under the POMCUS program has been an integral part of the NATO war plan for a long time. Prepositioning would speed deployment of combat forces, because much of the combat equipment is already in place and only the people and residual equipment would require airlift from the United States. Land-based prepositioning requires the full support of a host country, as they must supply the land and to a large degree, the security and maintenance for the equipment. Though several countries in Southwest Asia acknowledge the RDF's importance to their stability only Egypt and Oman have so far been forthcoming in offering sites for the United States to preposition unit equipment. 9/ The few (albeit important) offers that most Gulf states have made have been limited to allowing facility improvements and selective storage of noncombat equipment. As a result, other methods of prepositioning were developed. Prepositioning equipment and supplies aboard ships and stationing them in the Indian Ocean became the quickest way for the United States to demonstrate a commitment to security in the region and to send a clear signal of U.S. resolve. As early as the Kennedy Administration, consideration was given to prepositioning unit equipment aboard ships for use in military contingencies in parts of the world to which the United States did not have ready access. Nothing

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9. Prepositioning, in addition to economic effects on the host nation, also has a significant political price, especially in the Third World. A large stockpile of combat equipment owned by the United States can jeopardize a host country's credibility as nonaligned with either NATO or the Warsaw Pact.

progressed beyond the planning stage until 1980, after the idea an of RDF was formulated.

Prepositioning ships are not assault ships but are floating warehouses that enhance strategic mobility in a particular combat theater by providing a stockpile of combat and support equipment for immediate use by arriving forces. They serve as a complement to amphibious ships, which have been the mainstay of the Marine Corps for years. 10/ Prepositioning at sea offers greater flexibility than land-based prepositioning: as the need arises, a ship can be moved from one contingency area to another. At the same time, though, sea-based prepositioning has certain disadvantages. A combat-free environment is required for unloading, and both the current fleet and the planned expansions require improved port facilities. At present, 17 chartered merchant ships to support the RDF are prepositioned near the Indian Ocean island base of Diego Garcia, and one is prepositioned in the Mediterranean. Six of these ships carry the combat and support equipment for one Marine Amphibious Brigade 11/; five carry ammunition and supplies for Army and Air Force components of the RDF; one ship houses two 400-bed Army field hospitals and one 200-bed combat support hospital for use by the Marine Corps. With the exception of the Marine Corps brigade's equipment, no combat materiel is now prepositioned at sea. The 18-ship Near-Term Prepositioned Force (this fleet's current name) contains, in addition to its freighters, five tankers with fuel and fresh water. Being merchant ships, all are manned by civilians, and except for short periods when equipment requires maintenance, most remain on station year round near Diego Garcia. 12/ The operations and support costs for the fleet in 1982 was $137 million.

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10. The Marine Corps is expanding their amphibious fleet over the next five years at considerable cost. Appendix B discusses the amphibious ship program and the five-year costs to execute the program.

11. The Marine Corps brigade, based at 29 Palms, California, would be flown to the Persian Gulf to link up with its equipment once the RDF was deployed. Supplies aboard the ships could sustain the brigade for 30 days. See "Prepositioned Gear in Mideast to Triple," The Army Times, June 28, 1982.

12. Though maintenance on the ships can generally be done on station, maintenance of equipment and ammunition cannot. Therefore, the ships must sail for the Philippines once every six to nine months for maintenance. Initial maintenance inspections have indicated that storage at sea had little or no adverse effect on the equipment. As a result, the interval between maintenance was extended.

Prepositioning Improvements. Though the Army and the Air Force have no immediate plan to increase their land- and sea-based prepositioning appreciably, the Marines intend to triple the size of their prepositioned force by 1987 at a total five-year cost of approximately $1.6 billion. 13/ Under the Maritime Prepositioning Ship (MPS) program, the Marine Corps plans to preposition on ships the equipment for three Marine Amphibious Brigades (roughly a division-sized contingent), plus supplies for 30 days of combat.

To support this concept, the Navy has contracted with commercial shippers to provide 13 vessels uniquely configured for prepositioning use. The equipment, ammunition, and supplies to support each Marine Amphibious Brigade for 30 days will be stored aboard these ships. All maintenance of equipment and supplies prepositioned aboard ship can be completed while the ship is on station, and for unloading and loading, the ships will be fitted to operate independent of port facilities.

Rather than procure these ships directly, the Navy decided to charter them. In the judgment of Navy officials, the long-term costs to charter the ships will be less than purchasing them, while chartering stock from private owners avoids use of procurement funds. Furthermore, they believe that chartering existing ships would speed availability. The first four are to be available in fiscal year 1984, and the second set of eight in fiscal year 1985. The program will be completed when a thirteenth ship is delivered in fiscal year 1986.

MOBILITY FOR THE RDF

How adequate the proposed mobility enhancement program would be to meet the needs of an RDF is clearly a function of what size RDF is chosen. Any increase in the size of the RDF would require an increase in strategic lift capabilities to meet a constant set of deployment criteria. For the purpose of this analysis, the principal criterion is the time--30 days--needed to deliver a full complement of RDF unit equipment to Southwest Asia. (Table 4 summarizes the mobility requirements and the costs of achieving a 30-day deployment criterion for each force level.)

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13. This cost is only the five-year leasing cost of the prepositioned ships and does not include the cost to procure and maintain Marine Corps equipment aboard them.

TABLE 4. PROJECTED CHANGES TO MOBILITY PROGRAM FOR THREE RDF FORCE LEVELS

	Larger RDF	Current RDF	Smaller RDF
Increases (+) and Decreases(-) in Numbers of Assets			
Aircraft	0	0	-18 C-17 -48 C-5
Fast Cargo Ships	+8 SL-7-Class Ships	0	0
Prepositioning Ships and Combat Equipment	+10 Prepositioning Ships, +1 Division Set of Equipment	0	0
Cost Increases (+) and Decreases(-) in Costs (Billions of 1984 dollars)			
1984	+0.5	0	-1.4
1985	+1.2	0	-2.3
1986	+1.3	0	-2.6
1987	+1.4	0	-3.0
1988	+1.4	0	-1.7
Total	5.8	0	-11.0

SOURCE: Congressional Budget Office.

The Larger RDF

A decision to establish the larger RDF of 440,000 would increase the lift requirement for full deployment of the unit equipment from approximately 396,000 tons to nearly 737,000 tons--an increase of 86 percent. Mobility improvements proposed by the Administration appear insufficient to satisfy this study's time criterion for so large a force. Figure 6 illustrates the improvements this program would achieve as measured by the total tonnage that could be delivered to Southwest Asia within 30 days.